

Subject Index

Volume 27

AAdenosine triphosphatase, membrane, inhibition by α -tocopherol, 987
Africans, intestinal glucose absorption, 91
Age, vitamin E requirement, 1017
Aged
 plasma and leukocyte ascorbic acid levels, 144
 problems, 1037
Alcoholism, relationship of dietary tryptophan and niacin to tryptophan metabolism, 572
Amino acids
 crystalline solutions, comparison with fibrin hydrolysates in parenteral nutrition, 163
 needs for growth and development, 55
 plasma free, in severe malnutrition, 733
 plasma levels in uremic patients on essential amino acid diet, 806
 requirements of young women on low nitrogen diets, 130
Anemia
 hypertriglyceridemia in hemodialysis patients during oral dromostanolone therapy for, 901
 mortality, 323
 pathogenesis of in coastal New Guineans, 1079
 sickle cell: *see* Sickle cell anemia
 vitamin E deficiency in monkeys, 1141
Angina pectoris, vitamin E, 1174
Anorexia nervosa, hypercarotenemia, 362
Antibiotics, low dose, enteritis-malabsorption-malnutrition in children, 304
Antigen, K88, protection by neutralizing, 1441
Ascorbate
 interactions with cholesterol and lecithin in atherosclerosis, 866
 low status in Masai of Kenya, 310
Ascorbic acid
 cholesterol levels in pastoral people, 1039
 fine structural effects on buccal epithelium, 719
 increased intake and leukocyte and organ concentrations of, 368
 plasma and leukocyte levels of, in the elderly, 144
 thiamin-sparing effect, 696
 tryptophan metabolism, 770
Atherosclerosis
 ascorbate-cholesterol-lecithin interactions, 867
 lipid metabolism, 29
Basic data, new, for nutritionists and dietitians, 425
Basic research in medicine, 1037
Batten's disease, blood levels of α -tocopherol, 1152
Bile acid
 alterations in duodenal aspirates in protein-calorie malnutrition, 788
 metabolism after bypass for obesity, 1369
 microbial transformation, 1341
Biopterin, determined protozoologically, 1247
Bladder stone disease in Thailand, 877
Blood responses to sugars, 819
Body composition, estimation of, 1380
Bone, mineral content of Eskimos, 916
Bowel, irritable, unprocessed bran in treatment of, 106
Bran, unprocessed, in treatment of irritable bowel syndrome, 106
Buccal epithelium, fine structural effects of ascorbic acid, 719
Bypass, small bowel, bile acid metabolism and hepatic disease after, 1369

C
Cachexia, anorexia nervosa, 362
Calcium
 interrelationship with dietary components, 603
 metabolism, dietary protein, 584
Cancer, colon
 opportunistic infections, 1481
 steroid nuclear dehydrogenation, 1475
Candida species, isolation from gastrointestinal tract in malnourished children, 345
Carbohydrates
 indigestible, 1201
 serum lipids, 1043
Carbon monoxide, environmental, multiple sclerosis, 105
Carotene in anorexia nervosa, 362
Cation pump failure, delirium tremens, 447
Cellular immunity, impaired, in marasmic infants, 615
Cereals, lysine supplementation, 1357
Cerebrospinal fluid, absorption and passage of

Abstracts submitted to the 14th Annual Meeting of the ASCN were published on pages 432 through 446 of the April 1974 issue of AJCN. Authors and subjects are not indexed here.

fat- and water-soluble thiamin derivatives, 676

Chemostat man, villus in, 1266

Children: see also Infants

- Jordanian, protein-energy malnutrition, 1254
- lactose intolerance, 547
- lactose malabsorption, 728
- lipid absorption in protein-calorie malnutrition, 777, 788
- malnourished
 - isolation of *Candida* species from gastrointestinal tract, 345
 - serum and liver triglycerides, 610
- Mexican American, nutritional status, 1359
- preschool, in Iran, nutrition, 1088
- Thai, thiamin deficiency, 1399

Cholesterolemia, surfactant in Maasai, 464

Cholesterol

- ascorbic acid in pastoral people, 1039
- input-output analysis, 1214
- interactions with ascorbate and lecithin in atherosclerosis, 866
- relationship to plasma vitamin E, 334

Chromium nutrition, 505

Claudication, intermittent, treatment with vitamin E, 1179

Clofibrate effect on plasma glucose and serum immunoreactive insulin in hyperlipoproteinemia, 22

Coenzyme Q, vitamin E, 1026

Colon

- opportunistic infections in carcinoma, 1481
- spiral-shaped organisms on surface epithelium, 1287
- steroid nuclear dehydrogenation and cancer, 1475

Comments in Biochemistry, 175, 380, 746, 866

Contraceptives, oral

- plasma concentration of pyridoxal phosphate, 326
- vitamin A metabolism, 125
- vitamin B₆ metabolism, 797

Copper metabolism in pellagra, 108

Coronary flow in advanced thiamin deficiency, 136

Creatine, dietary intake, 1036

Creatine kinase in muscular dystrophy and vitamin E deficiency, 1117

Creatinine

- dietary intake, 1036
- pool expansion in excretion of, 769

Cretinism in Ecuador, 531

Cyanate, sickle cell anemia and dietary precursors of, 765

Dehydrogenation, steroid nuclear, colon cancer, 1475

Delirium tremens, cation pump failure, 447

Deoxyribonucleic acid, dietary sucrose and starch, and formation of, 1204

Diabetes, hepatic glucose metabolism, 746

Diarrhea, lipid absorption in protein-calorie malnutrition, 777, 788

Diet

- cholesterol-free, semi-synthetic, 29
- effect on human fecal flora, 1456
- essential amino acid, in uremia, 806
- glucose tolerance in obesity, 1065
- high beef, effects on bowel flora, 1470
- high in glucose or sucrose, 926
- intake of creatine or creatinine, 1036
- low calorie, protein-sparing effect, 3
- Puerto Rican, nutrient analysis, 840
- Southeast Asia, iron absorption, 826
- sucrose in, and DNA formation, 1204
- vegetarian, 1095
- vitamin E-polyunsaturated lipid relationship, 952

Dietary Management and Therapy, 304

Digestion of biologic materials, apparatus and procedure for, 528

Dipeptidases, intestinal, in primary protein malnutrition, 760

Disaccharidase, effect of progesterone on intestinal activities, 845

Down's syndrome, pyridoxal phosphate in lymphocytes, polymorphonuclear leukocytes, and platelets, 521

Dromostanolone, hypertriglyceridemia in hemodialysis patients, 901

Drugs, metabolism by intestinal microorganisms, 1348

Duodenum

- alterations in bile acid content of aspirates in protein-calorie malnutrition, 788
- micellar solubilization of lipids in protein-calorie malnutrition, 777

Ecuador, cretinism, 531

Editorial, 223, 447

Electron microscopy, liver injury in protein-calorie malnutrition, 550

Energy expenditure, food intake and during cycle ergometry, 254

Energy intake, lysine supplementation, 671

Enteric disease, cellular immunity, 1424

Enteritis-malabsorption-malnutrition in children, low dose antibiotic feeding, 304

Erythrocytes

- absorption and passage of fat- and water-soluble thiamin derivatives into, 676
- fatty acid composition of, and susceptibility to vitamin E deficiency, 945
- transketolase levels, 905

Erythropoiesis, ^{15}N studies of, after marasmus, 230

Eskimo, bone mineral content, 916

Ethanol, release of vitamins into liver perfusates, 743

Fat, saturated, 188, 228

Fatty acids

- biohydrogenation by intestinal microflora, 1329
- in erythrocytes, and susceptibility to vitamin E deficiency, 945

Ferritin, serum, as measure of iron stores, 681

Fiber

- antitoxic effects, 1395
- dietary, coronary heart disease, 1202

Fibrin hydrolysates, comparison with crystalline amino acid solutions in parenteral nutrition, 163

Fibroplasia, retroental, premature infants and vitamin E deficiency, 1158

Flavor, 223

Fluoride, dietary, in United States, 590

Fluorine, necessity for man, 515

Folate

- in Himalayan village, 217
- in serum and marrow tissue of hospitalized patients, 580
- in vegetarians, 712
- red cell, after partial gastrectomy, 51, 899

Folate deficiency, prevention in pregnancy by food fortification, 339

Folic acid

- abnormalities in iron deficiency, 355
- intestinal absorption in protein deficiency, 350

Food, flavor, 223

Food faddism, 1071

Food intake, energy expenditure during cycle ergometry, 254

Gastrectomy, partial, red cell B_{12} and folate levels after, 51, 899

Gastrointestinal tract: *see also* Intestine

- isolation of *Candida* species from, in malnourished children, 345

Glucose

- diets high in, 926
- hepatic metabolism in diabetes, 746
- intestinal absorption in Africans, 91
- plasma, effect of clofibrate on in hyperlipoproteinemia, 22

Glucose tolerance, effects of diet and weight loss on, in obesity, 1065

Glycerides, serum, turnover rate during weight loss, 850

Glycine, ^{15}N -labeled, erythropoiesis after marasmus, 230

Goiter, Himalayan endemic, pathophysiology, 96

Growth

- dietary protein and immune function, 908
- protein and amino acid needs for, 55
- zinc supplementation, 112

Growth hormone after kwashiorkor, 1200

Guanine nucleotides, significance in biochemical processes, 380

Heat disease

- coronary
- dietary fiber, 1202
- interactions between nutrition and heredity, 80
- ischemic, magnesium interrelationships, 59
- sucrose and hypertension, 403

Hematology, vegetarians, 712

Hemodialysis, hypertriglyceridemia during dromostanolone therapy, 901

Hemoglobin in Himalayan village, 217

Hemoglobin meter, 672

Heredity, interactions with nutrition in coronary heart disease, 80

Himalayas

- hemoglobin, vitamin B_{12} , and folate, 217
- pathophysiology of endemic goiter, 96

Human chorionic gonadotropin, treatment for obesity, 450

Hypercarotenemia in anorexia nervosa, 362

Hyperlipoproteinemia, effect of clofibrate on plasma glucose and serum immunoreactive insulin, 22

Hypertension, sucrose and heart disease, 403

Hypertriglyceridemia in hemodialysis patients during oral dromostanolone therapy for anemia, 901

Immune response, effects of malnutrition on, 638

Immune responsiveness, protein deficiency, 647

Immunity

- cell-mediated, in protein-calorie malnutrition, 625
- depression of in malnutrition and in measles, 665

Immunoglobulins

- interactions between levels of and dietary protein, 908
- serum levels in protein-calorie malnutrition, 625

Immunology, nutrition, 623

Infants: *see also* Children

- exploratory behavior and activity during nutritional and rearing restriction, 458
- impaired cellular immunity in marasmus, 615
- obesity index, 706
- premature, vitamin E deficiency and retroental fibroplasia, 1158

Insulin
 serum, after kwashiorkor, 1200
 serum immunoreactive, effect of clofibrate on in hyperlipoproteinemia, 22

International Nutrition, 91, 213, 310, 531, 610, 756, 877, 1079, 1254, 1399

Intestine: see also Gastrointestinal tract
 absorption of intact proteins in normalcy and protein deficiency, 276
 absorption of D-xylose and folic acid in protein deficiency, 350
 biohydrogenation of sterols and fatty acids by microflora, 1329
 dipeptidases in primary protein malnutrition, 760
 disaccharidase activities, 845
 drug metabolism by microorganisms, 1348
 glucose absorption in Africans, 91
 immunologic control of soluble protein absorption, 1434
 isolation and identification of bacteria, 1450
 mechanisms controlling microflora, 1409
 metabolic interactions among microorganisms, 1320
 microecology, 1409
 morphological alterations in microvillous border, 1277
 nutritional features and ecology of anaerobic bacteria, 1313
 specific immune antibacterial mechanisms, 1417

Iran
 nutrition in preschool children, 1088
 zinc supplementation in malnourished children, 112

Iron
 absorption from Southeast Asia diets, 826
 effects of fortification, 373
 measurement of daily dietary absorption of, by extrinsic tag model, 152
 total and ionizable, in common Indian cooked foods, 455

Iron deficiency, folic acid abnormalities, 355

Iron stores, serum ferritin as measure of, 681

Isoleucine, requirements for with low nitrogen diets, 130

Isoniazid, pyridoxine status in therapy with, 479

Jamaica, lactose intolerance in young children, 728

Jejunal mucosa, effects of protein-calorie malnutrition on in tetracycline-treated pigs, 287

Kenya
 ascorbic acid and cholesterol levels, 1039
 low ascorbate status in Masai, 310

Ketonuria, resistance to in obesity, 1212

Ketosis, resistance to in obesity, 1212

Kwashiorkor
 serum insulin and growth hormone after, 1200
 treatment with opaque-2 maize, 122

Lactase deficiency in rural Mexico, 756

Lactose intolerance
 in young children and their parents, 547
 milk consumption, 296

Lactose malabsorption in young children, 728

Lean body mass, stature, 595

Lecithin interactions with ascorbate and cholesterol in atherosclerosis, 866

Letters to the Editor, 1, 105, 226, 323, 450, 671, 765, 899, 1035, 1200, 1357

Leukocytes, ascorbic acid concentrations, 368

Lipids
 absorption in protein-calorie malnutrition, 777, 788
 metabolism and atherosclerosis, 29
 polyunsaturated, relationship to vitamin E in diet and tissues, 952
 serum
 alteration, 268
 carbohydrates, 1043

Liver
 disease after bypass for obesity, 1369
 glucose metabolism in diabetes, 746
 injury in protein-calorie malnutrition, 550
 microsomal hydroxylations, vitamin E, and steroids, 966
 release by ethanol of vitamins into perfusates, 743
 triglycerides in malnourished children with fatty liver, 610
 vitamin A concentrations, 883

Lymphocytes, pyridoxal phosphate in Down's syndrome, 521

Lysine
 supplementation, energy intake, 671
 supplementation of cereals, 1357
 supplementation of wheat proteins, 1231

Maasai, surfactant and cholesterolemia, 464

Macaca mulatta, protein deprivation, 13

Magnesium interrelationships in ischemic heart disease, 59

Maize, opaque-2, treatment of kwashiorkor, 122

Malabsorption
 lactose, in young children, 728
 serum retinol transport, 700

Malnutrition
 depression of immunity in, 665
 development of, 813
 immune response, 638

isolation of *Candida* species from gastrointestinal tract, 345

primary protein, intestinal dipeptidases, 760

protein-calorie

- basal energy metabolism, 892
- jejunal mucosa of tetracycline-treated pigs, 287
- liver injury, 550
- micellar solubilization of lipids by duodenum, 777
- serum levels of immunoglobulins, cell-mediated immunity, and phagocytosis, 625
- water and element content of plasma and red cells, 260

protein-energy, in Jordanian children, 1254

serum and liver triglycerides, 610

severe, serum proteins and plasma free amino acids, 733

zinc supplementation, 112

Marasmus

- impaired cellular immunity, 615
- ¹⁵N studies of erythropoiesis after, 230

Marrow, vitamin B₁₂ and folate in hospitalized patients, 580

Measles, depression of immunity in, 665

Menstrual dysfunction, anorexia nervosa, 362

Metabolic fuel regulatory system, 175

Methods in Nutrition, 521, 1247

Mexico, lactase deficiency in a rural area, 756

Microcirculation, skin, tocopherols, 1110

Microvillous border, morphological alterations, 1277

Milk

- consumption of and lactose intolerance, 296
- human and cow's, polyamines in, 859

Multiple sclerosis, environmental CO, 105

Muscle, upper arm, norms for assessment of nutritional status, 1052

Muscular dystrophy, creatine kinase and myofibrillar proteins, 1117

New Guinea

- dietary protein and immune function, 908
- pathogenesis of anemia, 1079

Niacin, intake of and tryptophan metabolism in alcoholics, 572

- in schizophrenics, 565

Nickel, necessity for man, 515

Nigeria, food taboos, 213

Nitrofuside, dietary, sickle cell anemia in Africa, 766

Nitrogen

- retention, 1059
- urinary excretion as measure of dietary intake, 771

Nitrogen-15, erythropoiesis after marasmus, 230

Nitrogen balance, essential amino acid diet in uremia, 806

Nutrient analysis, Puerto Rican diet, 840

Nutrition

- accreditation as a medical subspecialty, 1195
- immunology, 623
- in preschool children in Iran, 1088
- interactions with heredity in coronary heart disease, 80
- parenteral, fibrin hydrolysates vs. crystalline amino acid solutions, 163
- pregnant women's serum vitamin A levels, 688

Nutrition News, 220, 316, 426, 544, 621, 764, 897, 1095, 1403

Nutritional and rearing restriction, exploratory behavior and activity of infant monkeys during, 458

Nutritional status

- measurement, 1259
- of Mexican American children, 1359
- triceps skin fold and upper arm muscle size, 1052

Obesity

- bile acid metabolism and hepatic disease after bypass, 1369
- effects of diet and weight loss on glucose tolerance, 1065
- etiology, 226

Fogarty Center Conference on, 423

human chorionic gonadotropin, 450

index for infants, 706

- protein-sparing effect in low calorie diets, 3
- resistance to ketonuria and ketosis, 1212
- turnover rate of serum glycerides during weight loss, 850

Osteoporosis in vegetarians and omnivores, 769

Oxalate, bladder stone disease, 877

Oxygen consumption, myocardial, in advanced thiamin deficiency, 136

Parity, vitamin E requirement, 1017

Parotid saliva, responses to sugars, 819

Pellagra, copper metabolism, 108

Perspectives in Nutrition, 59, 188, 403, 485, 603, 1071, 1231, 1395

Phagocytes, bactericidal activities, 629

Phagocytosis in protein-calorie malnutrition, 625

Phenylalanine, requirements for with low nitrogen diets, 130

Plasma

- effect of oral contraceptives on concentration of pyridoxal phosphate in, 326
- vitamin E and cholesterol relationship, 334
- water and element content in protein-calorie malnutrition, 260

Platelets, pyridoxal phosphate in Down's syndrome, 521

Polyamines in human and cow's milk, 859

Polymorphonuclear leukocytes, pyridoxal phosphate in Down's syndrome, 521

Pregnancy

- effects of nutrition on serum vitamin A levels, 688
- prevention of folate deficiency by food fortification, 339
- riboflavin status, 1225
- vitamin B₁ status, 1221

Presidential address, 1195

Progesterone, effect on disaccharidase activities in intestine, 845

Prosopis cineraria, unconventional legume, 1035

Protein:calorie ratios, evaluation of nutritional quality of food, 485

Protein deficiency

- immune responsiveness, 647
- intestinal absorption of D-xylose and folic acid, 350
- nonspecific protective substances of serum, 1390

Protein deprivation in adult rhesus monkeys, 13

Protein-sparing therapies in caloric deprivation and disease, 175

Proteins

- calciuretic effect, 584
- dietary, immune function, 908
- gastrointestinal loss in hookworm and round-worm infections, 1386
- immunologic control of absorption from intestine, 1434
- intact, intestinal absorption in normalcy and protein deficiency, 276
- minimum breakdown in obese women on low calorie diets, 3
- myofibrillar, in muscular dystrophy and vitamin E deficiency, 1117
- needs for growth and development, 55
- selenide-containing, stabilizing effect of vitamin E, 995
- serum, in severe malnutrition, 733
- wheat, lysine supplementation, 1231

Pyridoxal

- heat stability of synthetic and natural, 323
- serum, heat stability, 1357, 1358

Pyridoxal phosphate

- effect of oral contraceptives on plasma concentration, 326
- in Down's syndrome, 521

Pyridoxine: *see also* Vitamin B₆

- status in isoniazid therapy, 479

Red cell, water and element content in protein-calorie malnutrition, 260

Reports of Meetings, 423, 1259

Retinol, serum transport in malabsorption, 700

Riboflavin status in pregnancy, 1225

Rotifer, tocopherol effect, 1005

Schizophrenia, relationship of dietary tryptophan and niacin to tryptophan metabolism, 565

Selenide, stabilizing effect of vitamin E on proteins containing, 995

Selenium-glutathione peroxidase, vitamin E, 960

Serum

- ferritin as measure of iron stores, 681
- nonspecific protective substances in protein deficiency, 1390
- triglycerides in malnourished children with fatty liver, 610
- vitamin B₁₂ and folate in hospitalized patients, 580

Sickle cell anemia

- dietary precursors of cyanate, 765
- in Africa, dietary nitriloside, 766

Silicon, necessity for man, 515

Skin, comparison of tocopherols on microcirculation, 1110

Stature, lean body mass, 595

Steroids, vitamin E and liver microsomal hydroxylations, 966

Sterols, biohydrogenation by intestinal microflora, 1329

Sucrose

- dietary, DNA formation, 1204
- diets high in, 926
- hypertension and heart disease, 403
- serum lipids, 1043

Sugars, blood and parotid saliva responses to, 819

Surfactant, cholesterolemia in Maasai, 464

Tetracycline, effects of protein-calorie malnutrition on jejunal mucosa of pigs treated with, 287

Thailand

- bladder stone disease, 877
- plasma and liver concentrations of vitamin A, 883
- thiamin deficiency in children, 1399

Thiamin, determination of urinary, 837

Thiamin deficiency

- in Thai children, 1399
- use of ascorbic acid, 696
- ventricular performance, coronary flow, and myocardial oxygen consumption, 136

Thiamin derivatives, fat- and water-soluble, absorption and passage into erythrocytes and cerebrospinal fluid, 676

Threonine, requirements for with low nitrogen diets, 130

Tin, necessity for man, 515

α-Tocopherol: *see also* Vitamin E
blood levels in Batten's disease, 1152
growth and development of rotifers, 1005
inhibition of membrane ATPase, 987

γ-Tocopherol in vitamin E nutrition, 980

Tocopherols, stereochemical designation, 1105

α-Tocopherol nicotinate and acetate, skin microcirculation, 1110

Transketolase, erythrocyte levels, 905

Triglycerides, serum and liver, in malnourished children with fatty liver, 610

Tryptophan
intake and metabolism
in alcoholics, 572
in schizophrenics, 565
metabolism of, and ascorbic acid, 770

United States
dietary fluoride in different areas of, 590
nutritive value of per capita food supply, 1

Uremia, essential amino acid diet, 806

Urine, thiamin determination, 837

Vanadium, necessity for man, 515

Vegetarianism, 1095
hematology, vitamin B₁₂, and folate, 712

Ventricular performance in advanced thiamin deficiency, 136

Villus in chemostat man, 1266

Vitamin A
effect of oral contraceptives on metabolism, 125
in anorexia nervosa, 362
nutrition and serum levels of in pregnancy, 688
nutrition via intramuscular or oral route, 234
plasma and liver concentrations in Thailand, 883
supplementation with and vitamin E requirement, 1017
vitamin E supplements and absorption of massive dose of, 774

Vitamin A deficiency, basal energy metabolism, 892

Vitamin B₁ status in pregnancy, 1221

Vitamin B₆: *see also* Pyridoxine
oral contraceptives and metabolism of, 797

Vitamin B₁₂
in Himalayan village, 217
in serum and marrow tissue of hospitalized patients, 580
in vegetarians, 712
red cell, after partial gastrectomy, 51, 899

Vitamin B₁₂ deficiency, 470

Vitamin E: *see also* *α*-Tocopherol
absorption of massive vitamin A dose, 774
age, parity, vitamin A supplementation, and requirement for, 1017
coenzyme Q, 1026
human requirements for, 1182
in angina pectoris, 1174
nutrition via intramuscular or oral route, 234
plasma, relation to cholesterol, 334
relationship to polyunsaturated lipids in diet and tissues, 952
selenium-glutathione peroxidase, 960
stabilizing effect, 995
steroids and liver microsomal hydroxylations, 966
symposium on, 937, 1101
γ-tocopherol and nutrition of, 980
treatment of intermittent claudication with, 1179

Vitamin E deficiency
anemia in monkeys, 1141
creatine kinase and myofibrillar proteins, 1117
fatty acid composition of erythrocytes and susceptibility to, 945
pathophysiology in monkeys, 1130
retrorenal fibroplasia in premature infants, 1158

Vitamins
nutriture in day care children, 559
release by ethanol into liver perfusates, 743

Water deprivation, in athletes, 1096

Weight loss
glucose tolerance in obesity, 1065
turnover rate of serum glycerides during, 850

Wheat, lysine supplementation of proteins, 1231

Xylose, intestinal absorption in protein deficiency, 350

Zinc supplementation in malnourished children, 112

Author Index

Volume 27

Acosta, P. B., 1359
Adams, W. H., 217
Adebonojo, F. O., 559
Adelman, R. C., 1037
Ahrens, R. A., 403
Aikawa, J. K., 447
Alderman, M. H., 728
Ames, S. R., 1017
Anderson, B. B., 1357
Anderson, J. T., 188, 1043
Anderson, J. W., 746
Anderson, T. W., 1174
Aranda, R. G., 1359
Arbeter, A., 625
Aref, K., 260
Armstrong, B. K., 712
Aromaa, A., 323
Arroyo, P., 756
Asher, W. L., 450
Attebery, H. R., 1456
Ausman, I. M., 1141
Azordegan, F., 1088
Bacchi, C. J., 1247
Baertl, J. M., 733
Baker, H., 580, 676, 743, 1247
Balows, A., 1486
Banwell, J. G., 1369
Barak, A. J., 743
Barker, M., 339
Barker, M. O., 945
Basu, A. K., 1386
Bauerfeind, J. C., 234
Beaton, G. H., 373, 485
Behall, K. M., 819, 926
Beisel, W. R., 304
Benjamin, F., 22
Bensinger, T. A., 355
Benson, E. M., 797
Bersohn, I., 29
Bhatt, I. N., 760
Bieri, J. G., 980
Bing, F. C., 1201
Björn-Rasmussen, E., 826
Blackburn, G. L., 175
Bloch, K. J., 1434
Blumenfeld, A., 226
Boatman, E. S., 276
Boggs, T. R., Jr., 1158
Booij, M. H., 672
Bradfield, R. B., 3, 850, 1036, 1065
Brain, P., 665
Bray, G. A., 254, 423
Brewton, K., 268
Brin, M., 234, 945
Briones, E. R., 771
Brooke, O. G., 610
Brooker, B. E., 1305
Brush, M. K., 130
Bryant, M. P., 1313
Bucana, C., 1152
Burgess, B., 665
Burkhalter, V. J., 905
Burr, M. L., 144
Burton, G. C., 1470
Butterworth, C. E., Jr., 866
Calloway, D. H., 584
Carpenter, M. P., 966
Carter, P. B., 1424
Char, D. F. B., 479
Chase, D. G., 1277
Choi, E. S. K., 901
Chu, J.-Y., 584
Chung, T., 901
Chuttani, H. K., 760
Clark, H. E., 1059
Clark, W. M., 819
Clarkson, T. B., 29
Cleary, R. E., 326
Coburn, S. P., 521
Collins, F. M., 1424
Colman, N., 339
Conrad, M. E., 355
Consolazio, C. F., 1380
Cook, D. C., 105
Cook, G. C., 91
Cook, J. D., 681
Cooper, W. C., 647
Coovadia, H. M., 665
Corcino, J. J., 840
Coursin, D. B., 1195
Crane, G. G., 1079
Crawford, P. B., 706
Daltabuit, M., 756
Davidson, L. M., 29
Davies, A. J. S., 638
Davies, J. D. G., 310, 1039
Davis, R. E., 323, 712, 1358
Delaney, A., 1079
Demaeyer, E. M., 638
Deo, M. G., 96
Desai, I. D., 334
Deutsch, S., 22
Dhanamitta, S., 877, 1399
Diplock, A. T., 995
Doscherholmen, A., 51, 900
Ducharme, D. M., 528
Edwards, M. A., 797
Elias, M. F., 458
El-Khateeb, S., 260
Ellis, F. R., 769
El Lozy, M., 260, 1357
Elwood, P. C., 144
Erlandsen, S. L., 1277
Ershoff, B. H., 1395
Eyssen, H., 1329
Falkner, F., 1259
Faulk, W. P., 638
Felsenfeld, O., 350
Fenderson, R. W., Jr., 22
Fierro-Benitez, R., 531
Finch, C. A., 681
Finegold, S. M., 1456
Fisher, H., 130
Flatt, J.-P., 175
Floch, M. H., 1265
Flores, H., 610
Flynn, M. A., 1470
Folkers, K., 1026
Forbes, G. B., 595
Fox, M. R. S., 112
Franco, D., 625
Frank, O., 580, 676, 743, 1247
Frayer, W., 728
Freier, S., 845
Freter, R., 1409
Friend, B., 1
Frisancho, A. R., 1052
Fuller, R., 1305
Gal, I., 688
Gamble, W. J., 136
Gandhi, B. M., 1035
Gandhi, P. C., 550
Garby, L., 826
Garces, J., 531
Geiger, J. W., 163
Ghassemi, H., 1088
Ghavami, P., 112
Giannella, R. A., 355
Gilbert, J. J., 1005

Goldbloom, D., 1065
 Goldin, B. R., 1348
 Goldman, P., 1348
 Goldstein, R., 845
 Gonzalez, M., 152
 Good, R. A., 647
 Gordon, J. E., 304
 Grace, J., 665
 Gracey, M., 345
 Graham, G. G., 733
 Grande, F., 188, 1043
 Green, R., 339
 Greenberg, M. S., 901
 Grim, J. N., 719
 Grimmer, P., 130
 Gubler, C. J., 696
 Gupta, C. P., 122
 Gupta, M. C., 1035, 1386
 György, P., 859
 Gyr, K., 350
 Haeger, K., 1179
 Hall, C. A., 899
 Hallberg, L., 826
 Hallett, F., 665
 Halsted, J. A., 112
 Hambidge, K. M., 505
 Hampton, M. C., 706
 Hankes, L. V., 770
 Harper, H. W., 450
 Harris, D. L., 1297
 Harris, J. W., 470
 Hatch, F. T., 80
 Hayes, K. C., 1130, 1141
 Hazuria, R. S., 760
 Heggtveit, H. A., 59
 Heller, S., 1221, 1225
 Hentges, D. J., 1265, 1470
 Hijazi, S. S., 1254
 Hill, C. W., 13
 Hill, D. C., 813
 Hill, M. J., 1475
 Hines, J. D., 470
 Hodgson, P. A., 771
 Hoffmann-Ostenhof, O., 1105
 Holdeman, L. V., 1450
 Holden, J. M., 926
 Hole, D. J., 144
 Holesh, S., 769
 Horn, L. R., 945
 Horwitt, M. K., 1182
 Houston, R. G., 766
 Howard, C. N., Jr., 966
 Huenemann, R. L., 706
 Hughes, R. E., 144
 Hurley, R. J., 144
 Huse, D. M., 771
 Hutner, S. H., 1247
 Isselbacher, K. J., 1434
 Jacobs, A. A., 629
 Jahin, S., 260
 Jaramillo, C., 531
 Jaya Rao, K. S., 892
 Jelliffe, D. B., 672
 Jervis, H. R., 1287
 Johnson, L., 1158
 Jones, D. V., 547
 Jones, G. W., 1441
 Jones, P., 1079
 Jourdan, M., 3, 850, 1036, 1065
 Kabil, A., 260
 Kabubi, S. K., 1200
 Kamimura, M., 1110
 Kao-Chen, S. M., 479
 Kaplan, M. E., 51, 900
 Kark, J. A., 470
 Karmarkar, M. G., 96
 Katsui, G., 987
 Katz, M., 304
 Kaufmann, N. A., 584
 Kawai, K., 987
 Keith, M. O., 368
 Keller, C. A., 706
 Kelly, A., 1079
 Kelsay, J. L., 819, 926
 Kenny, G. E., 276
 Kerr, G. R., 1357
 Keusch, G. T., 304, 1481
 Keys, A., 188, 1043
 Khalil, M., 260
 Khan, L., 892
 Kim, H. K., 29
 Kinney, J. M., 163
 Kinyon, J. M., 1297
 Kirk, J. R., 837
 Kitagawa, M., 29
 Klevay, L. M., 1202
 Kochupillai, N., 96
 Koppang, N., 1152
 Kopple, J. D., 806
 Körner, W. F., 1221, 1225
 Koyal, S. N., 254
 Kramer, L., 590
 Krishnamachari, K. A. V. R., 108
 Kritchevsky, D., 29
 Krumdieck, C., 866
 Krzywicki, H. J., 1380
 Kusin, J. A., 774
 Lambotte, C., 765
 Landau, H., 845
 Larwood, C. J., 712
 Latham, M. C., 296, 547
 Layrisse, M., 152
 Leche, J., 1079
 Lee, M., 334
 Leevy, C. M., 676
 Lewis, J. S., 1359
 Li, S-C., 13
 Li, T-K., 326
 Lieberman, S., 1214
 Lindenbaum, J., 700
 Lipschitz, D. A., 681
 Lisker, R., 756
 Lockwood, D. H., 1369
 Loening, W. E. K., 665
 Long, C. L., 163
 López-Habib, G., 756
 Lu, G. H. Y., 572
 Luckey, T. D., 304, 1266
 Lumeng, L., 326
 MacGregor, A., 1079
 Mackay, I. R., 908
 Mahloudji, M., 112
 Mahmud, K., 51, 900
 Mahuren, J. D., 521
 Maier, B. R., 1470
 Makdani, D. D., 1231
 Malcolm, L. A., 908
 Malhotra, S., 29
 Malzer, J. L., 1059
 Maner, J. H., 287
 Mann, G. V., 464, 1037
 Morgen, S., 3, 584, 850, 1036, 1065
 Mariani, T., 647
 Martinez-Torres, C., 152
 Mason, K. E., 1194
 Massoudi, M., 1088
 Mata, L. J., 304
 Mather, W., 916
 Mathews, J. D., 908
 Mayoral, L. G., 287
 Mazess, R. B., 916
 McBean, L. D., 603, 1071
 McLaren, D. S., 105, 230
 Metz, J., 339
 Meyer, K., 572
 Mickelsen, O., 1231
 Midtvedt, T., 1341
 Miles, L. E. M., 681
 Miller, D. S., 671
 Miller, L. T., 797
 Misra, R. C., 760
 Mitchell, G. W., Jr., 629
 Mohammadiha, H., 1204, 1212
 Mohan, N. C., 22
 Mollin, D. L., 1357
 Moncayo, F., 531
 Monroe, R. G., 136
 Moon, W. H., 1059
 Moore, W. E. C., 1450
 Morrison, R. S., 901

AUTHOR INDEX

Muiruri, K. L., 837
 Munro, H. N., 55
 Munson, D., 625
 Murdock, D. S., 696
 Myers, C., 901
 Nace, C. S., 673
 Naidoo, J., 665
 Nair, P. P., 29, 1369
 Nakao, M., 987
 Nakao, T., 987
 Nakazawa, H., 1287
 Nasr, F., 260
 Nelson, R. A., 771, 1380
 Neutra, M. R., 287
 Newmark, H., 234
 Newson, J., 310, 1039
 Nichoalds, G. E., 905
 Nicol, D. J., 712
 Nielsen, F. H., 515
 O'Brien, M., 268
 Ogbeide, O., 213
 Okel, R. M., 1200
 Olson, J. A., 883
 Olson, R. E., 1117
 Pacheco, F. P., 706
 Pang, R. L., 1059
 Parent, M. A., 665
 Parkinson, C. E., 688
 Parmentier, G., 1329
 Paul, B. B., 629
 Payne, I. R., 565, 572
 Payne, P. R., 671
 Pelletier, O., 368
 Pena, L. F., 528
 Peppercorn, M. A., 1348
 Philbrick, D. J., 813
 Phorpnphutkul, C., 136
 Piepmeyer, J. L., 106
 Placko, R. P., 733
 Pogson, C. I., 380
 Pongpanich, B., 1399
 Poukka Everts, R., 980
 Prather, E. S., 926
 Puri, B. K., 550
 Rahman, D. P., 1380
 Ramachandriah, U., 1390
 Ramalingaswami, V., 96
 Ramanujan, R. A., 550
 Ramirez, I., 531
 Ratnakar, K. S., 1390
 Read, M., 1359
 Read, W. W., 230
 Reddy, V., 122, 774
 Reid, D. B. W., 1174
 Reinhold, J. G., 112
 Reiser, R., 228
 Riopelle, A. J., 13

Ripley, D., 51, 900
 Robboy, M. S., 362
 Robinson, D. M., 1287
 Roche, A. F., 1259
 Romsos, D. R., 837
 Ronagh, H. A., 112
 Rosenberg, I. H., 304
 Rostenberg, I., 756
 Rowley, D., 1417
 Rubini, M. E., 223
 Rutter, J. M., 1441
 Ryan, M. P., 447
 Saboundjian, A., 230
 Salkeld, R. M., 1221, 1225
 Samonds, K. W., 458
 Samuel, P., 22, 1214
 Sanders, T. A. B., 769
 Sandstead, H. H., 515
 Sanguansermsri, J., 859
 Santini, R., 840
 Sarin, G. S., 760
 Sassoon, H. F., 227
 Sato, A. S., 362
 Sbarra, A. J., 629
 Schaffer, D., 1158
 Schedl, H. P., 769, 1036
 Schlesinger, L., 615
 Schlutz, G. O., 230
 Schneider, R. E., 777, 788
 Schwabe, A. D., 362
 Seakins, A., 610
 Seelig, M. S., 59
 Seibold, H. R., 13
 Sekowski, I., 22
 Selvaraj, R. J., 629
 Sewell, B., 268
 Shapiro, I. L., 29
 Sharma, D. C., 455
 Sherr, H. P., 1369
 Shorey, R. L., 268
 Shresta, S. M., 217
 Siakotos, A. N., 1152
 Sivakumar, B., 774
 Smith, B. K., 323, 1358
 Smith, F. R., 700
 Smith, G. W., 355
 Smith, J. L., 13
 Smythe, P. M., 665
 Snook, C. R., 91
 Soni, B. L., 455
 Sorrell, M. F., 743
 Speckmann, E. W., 603, 1071
 Spencer, H., 590
 Spoerry, A., 464
 Srikrirkirach, N., 1399
 Srivastava, P. N., 760
 Stanbury, J. B., 531
 Standal, B. R., 479
 Stekel, A., 615
 Stephenson, L. S., 296
 Stone, D. E., 345
 Stoopler, M., 728
 Strahs, S., 559
 Strauss, R. R., 629
 Suharjono, 345
 Sunoto, 345
 Suthutvoravoot, S., 883
 Sutter, V. L., 1456
 Suwanik, R., 826
 Swaim, W. R., 51, 900
 Swendseid, M. E., 806
 Swiss, L. D., 373, 485
 Szepesi, B., 673
 Takeuchi, A., 1287
 Takkunen, H., 323
 Tandon, B. N., 550, 1035, 1386
 Tandon, H. D., 550
 Tappel, A. L., 960
 Thaete, L. G., 719
 Thomson, A. D., 676
 Toskes, P. P., 355
 Trubowitz, S., 580
 Tsutakawa, R. K., 1470
 Tucker, L., 908
 Vaghefi, S. B., 1231
 Valyasevi, A., 877, 1399
 van Merwyk, A. J., 712
 Velez, H., 625
 Victor, M., 470
 Vitale, J. J., 623, 625
 Viteri, F. E., 777, 788
 Vos, G. H., 665
 Walker, W. A., 1434
 Walsh, E. M., 565
 Ward, G. M., 1380
 Warnock, L. G., 905
 Waterlow, J. C., 610
 Wesley, A., 665
 Whang, R., 447
 Whipp, B. J., 254
 White, J. J., 1369
 Whittenburg, E. J. R., 565
 Wiatrowski, E., 590
 Winter, P. A. D., 29
 Witting, L. A., 952
 Wolf, R. H., 13, 350
 Wolin, M. J., 1320
 Worthington, B. S., 276
 Yang, G.-Y., 479
 Yeung, D. L., 125
 Youmans, S., 1152
 Young, J., 797
 Zikria, B. A., 163
 Zilliken, F., 859

The American Journal of **CLINICAL NUTRITION**

Official Journal of The American Society for Clinical Nutrition, Inc.



VOLUME 27

January-December 1974

Copyright © 1974 by The American Society for Clinical Nutrition, Inc.

Requests for any reproduction of copyrighted material should be made in writing to the Executive Editor at 9650 Rockville Pike, Bethesda, Maryland 20014, and should include a statement of intended use and explicit specifications of the material to be reproduced.

CONTENTS

VOLUME 27

Number 1, January 1974

letters to the editor

1 Nutritive value of the United States per capita food supply. *B. Friend*

original communications

3 Protein-sparing effect in obese women fed low calorie diets. *M. Jourdan, S. Margen and R. B. Bradfield*
13 Protein deprivation in primates. I. Nonpregnant adult rhesus monkeys. *A. J. Riopelle, C. W. Hill, S-C. Li, R. H. Wolf, H. R. Seibold and J. L. Smith*
22 Effect of clofibrate on plasma glucose and serum immunoreactive insulin in patients with hyperlipoproteinemia. *R. W. Fenderson, Jr., I. Sekowski, N. Chandra Mohan, S. Deutsch, F. Benjamin and P. Samuel*
29 Lipid metabolism and experimental atherosclerosis in baboons: influence of cholesterol-free, semi-synthetic diets. *D. Kritchevsky, L. M. Davidson, I. L. Shapiro, H. K. Kim, M. Kitagawa, S. Malhotra, P. P. Nair, T. B. Clarkson, I. Bersohn and P. A. D. Winter*
51 The importance of red cell B₁₂ and folate levels after partial gastrectomy. *K. Mahmud, M. E. Kaplan, D. Ripley, W. R. Swaim and A. Doscherholmen*

special article

55 Report of a conference on protein and amino acid needs for growth and development. *H. N. Munro*

perspectives in nutrition

59 Magnesium interrelationships in ischemic heart disease: a review. *M. S. Seelig and H. A. Heggtveit*
80 Interactions between nutrition and heredity in coronary heart disease. *F. T. Hatch*

international nutrition

91 Site of glucose absorption from the intestine of Zambian African subjects. *G. C. Cook and C. R. Snook*
96 Pathophysiology of Himalayan endemic goiter. *M. G. Karmarkar, M. G. Deo, N. Kochupillai and V. Ramalingaswami*

Number 2, February 1974

letters to the editor

105 Environmental carbon monoxide and multiple sclerosis. *D. C. Cook*
105 Classifying nutritional disease. *D. S. McLaren*
106 Use of unprocessed bran in treatment of irritable bowel syndrome. *J. L. Piepmeyer*

brief communications

108 Some aspects of copper metabolism in pellagra. *K. A. V. R. Krishnamachari*

original communications

112 Zinc supplementation of malnourished schoolboys in Iran: increased growth and other effects. *H. A. Ronagh, J. G. Reinhold, M. Mahloudji, P. Ghavami, M. R. Spivey Fox and J. A. Halsted*
122 Treatment of kwashiorkor with opaque-2 maize. *V. Reddy and C. P. Gupta*
125 Effects of oral contraceptives on vitamin A metabolism in the human and the rat. *D. L. Yeung*
130 Reassessment of amino acid requirements of young women on low nitrogen diets. III. Iso-leucine, threonine, phenylalanine, and summation. *H. Fisher, M. K. Brush and P. Griminger*
136 Ventricular performance, coronary flow, and myocardial oxygen consumption in rats with advanced thiamin deficiency. *C. Phornphutkul, W. J. Gamble and R. G. Monroe*
144 Plasma and leukocyte ascorbic acid levels in the elderly. *M. L. Burr, P. C. Elwood, D. J. Hole, R. J. Hurley and R. E. Hughes*
152 Measurement of the total daily dietary iron absorption by the extrinsic tag model. *M. Layrisse, C. Martinez-Torres and M. González*
163 Comparison of fibrin hydrolysates and crystalline amino acid solutions in parenteral nutrition. *C. L. Long, B. A. Zikria, J. M. Kinney and J. W. Geiger*

comments in biochemistry

175 The metabolic fuel regulatory system: implications for protein-sparing therapies during caloric deprivation and disease. *J-P. Flatt and G. L. Blackburn*

perspectives in nutrition

188 Bias and misrepresentation revisited: "Perspective" on saturated fat. *A. Keys, F. Grande and J. T. Anderson*

international nutrition

213 Nutritional hazards of food taboos and preferences in Mid-West Nigeria. *O. Ogbeide*
217 Hemoglobin levels, vitamin B₁₂, and folate status in a Himalayan village. *W. H. Adams and S. M. Shresta*

220 nutrition news**220 erratum**

VOLUME CONTENTS

Number 3, March 1974

editorial

223 Flavor. *M. E. Rubini*

letters to the editor

226 A brief review of scientific opinion on the etiology of obesity. *A. Blumenfeld*
227 Reply to Arthur Blumenfeld. *H. F. Sassoon*
228 Saturated fat: a rebuttal. *R. Reiser*

original communications

230 Nitrogen-15 studies of erythropoiesis during recovery from marasmus. *W. W. C. Read, D. S. McLaren, A. Saboundjian and G. O. Schultz*
234 Vitamins A and E nutrition via intramuscular or oral route. *J. C. Bauernfeind, H. Newmark and M. Brin*
254 The acute effects of food intake on energy expenditure during cycle ergometry. *G. A. Bray, B. J. Whipp and S. N. Koyal*
260 Plasma and red cell water and elements in protein-calorie malnutrition. *M. Kahlie, A. Kaniel, S. El-Khateeb, K. Aref, M. El-Lozy, S. Jahin and F. Nasr*
268 Alteration of serum lipids in a group of free-living adult males. *R. L. Shorey, K. Brewton, B. Sewell and M. O'Brien*
276 Intestinal absorption of intact proteins in normal and protein-deficient rats. *B. S. Worthington, E. S. Boatman and G. E. Kenny*
287 Effects of protein-calorie malnutrition on the jejunal mucosa of tetracycline-treated pigs. *M. R. Neutra, J. H. Maner and L. G. Mayoral*
296 Lactose intolerance and milk consumption: the relation of tolerance to symptoms. *L. S. Stephenson and M. C. Latham*

dietary therapy and management

304 Infant and child enteritis—malabsorption—malnutrition: the potential of limited studies with low-dose antibiotic feeding. *I. H. Rosenberg, W. R. Beisel, J. E. Gordon, M. Katz, G. T. Keusch, T. D. Luckey and L. J. Mata*

international nutrition

310 Low ascorbate status in the Masai of Kenya. *J. D. Gatenby Davies and J. Newson*

PHS publications

315 Body weight, stature, and sitting height: white and Negro youths, 12 through 17 years, in the United States.

316 nutrition news

319 Program, Fourteenth Annual Meeting, ASCN

Number 4, April 1974

letters to the editor

323 The heat stability of synthetic and natural pyridoxal. *R. E. Davis and B. K. Smith*
323 Anemia and mortality. *H. Takkunen and A. Aromaa*

original communications

326 Effect of oral contraceptives on the plasma concentration of pyridoxal phosphate. *L. Lumeng, R. E. Cleary and T-K. Li*
334 Plasma vitamin E and cholesterol relationship in Western Canadian Indians. *I. D. Desai and M. Lee*
339 Prevention of folate deficiency in pregnancy by food fortification. *N. Colman, M. Barker, R. Green and J. Metz*
345 Isolation of *Candida* species from the gastrointestinal tract in malnourished children. *M. Gracey, D. E. Stone, Suharjono and Sunoto*
350 Intestinal absorption of D-xylose and folic acid in protein-deficient patas monkeys (*Erythrocebus patas*). *K. Gyr, R. H. Wolf and O. Felsenfeld*
355 Folic acid abnormalities in iron deficiency: the mechanism of decreased serum folate levels in rats. *P. P. Toskes, G. W. Smith, T. A. Bensinger, R. A. Giannella and M. E. Conrad*
362 The hypercarotenemia in anorexia nervosa: a comparison of vitamin A and carotene levels in various forms of menstrual dysfunction and cachexia. *M. S. Robboy, A. S. Sato and A. D. Schwabe*
368 Ascorbic acid concentrations in leukocytes and selected organs of guinea pigs in response to increasing ascorbic acid intake. *M. O. Keith and O. Pelletier*
373 A prediction of the effects of iron fortification. *L. D. Swiss and G. H. Beaton*

comments in biochemistry

380 Guanine nucleotides and their significance in biochemical processes. *C. I. Pogson*

perspectives in nutrition

403 Sucrose, hypertension, and heart disease: an historical perspective. *R. A. Ahrens*

reports of meetings

423 Fogarty Center Conference on Obesity. *G. A. Bray*

special announcement

425 New basic data for nutritionists and dietitians.

426 nutrition news

429 Program, Fourteenth Annual Meeting, ASCN
432 Abstracts

Number 5, May 1974

guest editorial

447 Delirium tremens: a clinical example of cation pump failure? *R. Whang, M. P. Ryan and J. K. Aikawa*

letters to the editor

450 Human chorionic gonadotropin treatment for obesity: a rebuttal. *W. L. Asher and H. W. Harper*
455 Total and ionizable iron in common Indian cooked foods. *B. L. Soni and D. C. Sharma*

original communications

458 Exploratory behavior and activity of infant monkeys during nutritional and rearing restriction. *M. F. Elias and K. W. Samonds*
464 Studies of a surfactant and cholesterolemia in the Maasai. *G. V. Mann and A. Spoerry*
470 Nutritional vitamin B₁₂ deficiency in rhesus monkeys *J. A. Kark, M. Victor, J. D. Hines and J. W. Harris*
479 Early changes in pyridoxine status of patients receiving isoniazid therapy. *B. R. Standal, S. M. Kao-Chen, G-Y. Yang and D. F. B. Char*

perspectives in nutrition

485 Evaluation of the nutritional quality of food supplies: prediction of "desirable" or "safe" protein:calorie ratios. *G. H. Beaton and L. D. Swiss*
505 Chromium nutrition in man. *K. M. Hambidge*
515 Are nickel, vanadium, silicon, fluorine, and tin essential for man? A review. *F. H. Nielsen and H. H. Sandstead*

methods in nutrition

521 Pyridoxal phosphate in lymphocytes, polymorphonuclear leukocytes, and platelets in Down's syndrome. *J. D. McHenry and S. P. Coburn*
528 A simple apparatus and procedure for digestion of biologic materials in determinations of nonvolatile elements. *D. M. Ducharme and L. F. Pena*

international nutrition

531 The clinical pattern of cretinism as seen in highland Ecuador. *R. Fierro-Benitez, I. Ramirez, J. Garces, C. Jaramillo, F. Moncayo and J. B. Stanbury*
544 nutrition news

Number 6, June 1974

original communications

547 Lactose intolerance in young children and their parents. *D. V. Jones and M. C. Latham*
550 Liver injury in protein-calorie malnutrition: an electron microscopic study. *B. N. Tandon, R. A. Ramanujan, H. D. Tandon, B. K. Puri and P. C. Gandhi*
559 Vitamin nutriture in black, urban, day care children. *F. O. Adebonojo and S. Strahs*
565 Relationship of dietary tryptophan and niacin to tryptophan metabolism in schizophrenics and nonschizophrenics. *I. R. Payne, E. M. Walsh and E. J. R. Whittenburg*
572 Relationship of dietary tryptophan and niacin to tryptophan metabolism in alcoholics and nonalcoholics. *I. R. Payne, G. H. Y. Lu and K. Meyer*
580 Survey of vitamin B₁₂ and folate in the serum and marrow tissue of hospitalized patients. *S. Trubowitz, O. Frank and H. Baker*
584 Studies in calcium metabolism. I. The calciuretic effect of dietary protein. *S. Morgen, J.-Y. Chu, N. A. Kaufmann and D. H. Calloway*

590 Dietary fluoride in different areas in the United States. *L. Kramer, D. Osis, E. Wiatrowski and H. Spencer*
 595 Stature and lean body mass. *G. B. Forbes*

perspectives in nutrition

603 A recognition of the interrelationship of calcium with various dietary components. *L. D. McBean and E. W. Speckmann*

international nutrition

610 Serum and liver triglycerides in malnourished Jamaican children with fatty liver. *H. Flores, A. Seakins, O. G. Brooke and J. C. Waterlow*
 615 Impaired cellular immunity in marasmic infants. *L. Schlesinger and A. Stekel*

621 nutrition news

symposium

Nutrition and immunology. Guest editors—*J. J. Vitale and R. A. Good*
 623 Introduction. *J. J. Vitale*
 625 Serum levels of immunoglobulins, cell-mediated immunity, and phagocytosis in protein-calorie malnutrition. *D. Munson, D. Franco, A. Arbeter, H. Velez and J. J. Vitale*
 629 Bactericidal activities of phagocytes in health and disease. *A. J. Sbarra, R. J. Selvaraj, B. B. Paul, R. R. Strauss, A. A. Jacobs and G. W. Mitchell, Jr.*
 638 Some effects of malnutrition on the immune response in man. *W. P. Faulk, E. M. Demaejer and A. J. S. Davies*
 647 Effects of protein insufficiency on immune responsiveness. *W. C. Cooper, R. A. Good and T. Mariani*
 665 An evaluation of factors associated with the depression of immunity in malnutrition and in measles. *H. M. Coovadia, M. A. Parent, W. E. K. Loening, A. Wesley, B. Burgess, F. Hallett, P. Brain, J. Grace, J. Naidoo, P. M. Smythe and G. H. Vos*

Number 7, July 1974

letters to the editor

671 Lysine supplementation and energy intake. *D. S. Miller and P. R. Payne*
 672 Request for bibliographic assistance. *D. B. Jelliffe*
 672 Use of a hemoglobin meter in the field. *M. H. Booij*
 673 High energy intravenous infusion in humans. *B. Szepesi and C. S. Nace*

brief communications

676 Absorption and passage of fat- and water-soluble thiamin derivatives into erythrocytes and cerebrospinal fluid of man. *H. Baker, A. D. Thomson, O. Frank and C. M. Leevy*

original communications

681 Serum ferritin as a measure of iron stores in normal subjects. *J. D. Cook, D. A. Lipschitz, L. E. M. Miles and C. A. Finch*
 688 Effects of nutrition and other factors on pregnant women's serum vitamin A levels. *I. Gal and C. E. Parkinson*
 696 Studies on the mechanism of the "thiamin-sparing" effect of ascorbic acid in rats. *D. S. Murdock, M. L. Donaldson and C. J. Gubler*

700 Human serum retinol transport in malabsorption. *F. R. Smith and J. Lindenbaum*
706 An obesity index for six-month-old children. *P. B. Crawford, C. A. Keller,
M. C. Hampton, F. P. Pacheco and R. L. Huenemann*
712 Hematological, vitamin B₁₂, and folate studies on Seventh-day Adventist vegetarians.
B. K. Armstrong, R. E. Davis, D. J. Nicol, A. J. van Merwyk and C. J. Larwood
719 Fine structural effects of L-ascorbic acid on buccal epithelium. *L. G. Thaete and
J. N. Grim*
728 Prevalence and persistence of lactose malabsorption among young Jamaican children.
M. Stoopler, W. Frayer and M. H. Alderman
733 Serum proteins and plasma free amino acids in severe malnutrition. *J. M. Baertl,
R. P. Placko and G. G. Graham*
743 Release by ethanol of vitamins into rat liver perfusates. *M. F. Sorrell, H. Baker,
A. J. Barak and O. Frank*

comments in biochemistry

746 Alterations in metabolic fate of glucose in the liver of diabetic animals. *J. W. Anderson*

international nutrition

756 Lactase deficiency in a rural area of Mexico. *R. Lisker, G. López-Habib, M. Daltabuit,
I. Rostenberg and P. Arroyo*
760 Intestinal dipeptidases in primary protein malnutrition. *R. S. Hazuria, G. S. Sarin,
P. N. Srivastava, R. C. Misra, I. N. Bhatt and H. K. Chuttani*

764 nutrition news**764 erratum**

Number 8, August 1974

letters to the editor

765 Sickle cell anemia and dietary precursors of cyanate. *C. Lambotte*
766 Dietary nitriloside and sickle cell anemia in Africa. *R. G. Houston*
769 The concept of pool expansion in creatinine excretion. *H. P. Schedl*
769 Osteoporosis in British vegetarians and omnivores. *F. R. Ellis, S. Holesh and
T. A. B. Sanders*
770 Interrelationships of ascorbic acid and tryptophan metabolism. *L. V. Hankes*
771 Urinary nitrogen excretion as objective measure of dietary intake. *D. M. Huse,
R. A. Nelson, E. R. Briones and P. A. Hodgson*

brief communications

774 Vitamin E supplements and the absorption of a massive dose of vitamin A. *J. A. Kusin,
V. Reddy and B. Sivakumar*

original communications

777 Luminal events of lipid absorption in protein-calorie malnourished children: relationship
with nutritional recovery and diarrhea. I. Capacity of the duodenal content to achieve
micellar solubilization of lipids. *R. E. Schneider and F. E. Viteri*
788 Luminal events of lipid absorption in protein-calorie malnourished children: relation-
ship with nutritional recovery and diarrhea. II. Alterations in bile acid content of duo-
denal aspirates. *R. E. Schneider and F. E. Viteri*

VOLUME CONTENTS

797 Vitamin B₆ metabolism in women using oral contraceptives. *L. T. Miller, E. M. Benson, M. A. Edwards and J. Young*

806 Nitrogen balance and plasma amino acid levels in uremic patients fed an essential amino acid diet. *J. D. Kopple and M. E. Swendseid*

813 Development of malnutrition in rats. *D. J. Philbrick and D. C. Hill*

819 Glucose, fructose, lactate and pyruvate in blood and lactate and pyruvate in parotid saliva in response to sugars with and without other foods. *J. J. Kelsay, K. M. Behall and W. M. Clark*

826 Iron absorption from Southeast Asian diets. *L. Hallberg, L. Garby, R. Suwanik and E. Björn-Rasmussen*

837 A simple automated method for the determination of urinary thiamin. *K. L. Muiruri, D. R. Romsos and J. R. Kirk*

840 Analysis of some nutrients of the Puerto Rican diet. *R. Santini and J. J. Corcino*

845 Disaccharidase activities in the rat intestine. II. Effect of progesterone. *R. Goldstein, H. Landau and S. Freier*

850 The turnover rate of serum glycerides in the lipoproteins of fasting obese women during weight loss. *M. Jourdan, S. Margen and R. B. Bradfield*

859 Polyamines in human and cow's milk. *J. Sanguansermsri, P. György and F. Zilliken*

comments in biochemistry

866 Ascorbate-cholesterol-lecithin interactions: factors of potential importance in the pathogenesis of atherosclerosis. *C. Krundieck and C. E. Butterworth, Jr.*

international nutrition

877 Studies of bladder stone disease in Thailand. XVII. Effect of exogenous source of oxalate on crystalluria. *A. Valyasevi and S. Dhanamitta*

883 Plasma and liver concentrations of vitamin A in a normal population of urban Thai. *S. Suthutvoravoot and J. A. Olson*

892 Basal energy metabolism in protein-calorie malnutrition and vitamin A deficiency. *K. S. Jaya Rao and L. Khan*

897 nutrition news

Number 9, September 1974

letters to the editor

899 Importance of red cell B₁₂ and folate levels after partial gastrectomy. *C. A. Hall*

900 Reply to Dr. Hall. *K. Mahmud, M. E. Kaplan, D. Ripley, W. R. Swaim and A. Doscherholmen*

brief communications

901 Hypertriglyceridemia in hemodialysis patients during oral dromostanolone therapy for anemia. *E. S. K. Choi, T. Chung, R. S. Morrison, C. Myers and M. S. Greenberg*

905 Erythrocyte transketolase levels in a high school student population by sex and ethnic group. *L. G. Warnock, G. E. Nichoalds and V. J. Burkhalter*

original communications

908 Interrelationships between dietary protein, immunoglobulin levels, humoral immune responses, and growth in New Guinean schoolchildren. *J. D. Mathews, I. R. Mackay, L. Tucker and L. A. Malcolm*

916 Bone mineral content of North Alaskan Eskimos. *R. B. Mazess and W. Mather*
 926 Diets high in glucose or sucrose and young women. *J. L. Kelsay, K. M. Behall, J. M. Holden and E. S. Prather*

symposium

Vitamin E: biochemistry, nutritional requirements and clinical studies. Guest editor—
M. K. Horwitt

PART I

939 Introduction. *M. K. Horwitt*
 945 Relationship between fatty acid composition of erythrocytes and susceptibility to vitamin E deficiency. *M. Brin, L. R. Horn and M. O. Barker*
 952 Vitamin E-polyunsaturated lipid relationship in diet and tissues. *L. A. Witting*
 960 Selenium-glutathione peroxidase and vitamin E. *A. L. Tappel*
 966 Vitamin E, steroids and liver microsomal hydroxylations. *M. P. Carpenter and C. N. Howard, Jr.*
 980 Gamma tocopherol: metabolism, biological activity and significance in human vitamin E nutrition. *J. G. Bieri and R. Poukka Evarts*
 987 Inhibition of membrane adenosine triphosphatase by α -tocopherol and its derivatives. *K. Kawai, M. Nakao, T. Nakao and G. Katsui*
 995 Possible stabilizing effect of vitamin E on microsomal, membrane-bound, selenide-containing proteins and drug-metabolizing enzyme systems. *A. T. Diplock*
 1005 Effect of tocopherol on the growth and development of rotifers. *J. J. Gilbert*
 1017 Age, parity, and vitamin A supplementation and the vitamin E requirement of female rats. *S. R. Ames*
 1026 Relationships between coenzyme Q and vitamin E. *K. Folkers*

Number 10, October 1974

Letters to the editor

1035 An unconventional legume—*Prosopis cineraria*. *M. C. Gupta, B. M. Gandhi and B. N. Tandon*
 1036 Dietary intake of creatine or creatinine. *H. P. Schedl*
 1036 Reply to Dr. Schedl. *M. Jourdan, S. Margen and R. B. Bradfield*
 1037 Basic research in medicine. *R. C. Adelman*
 1037 Problems of the aged. *G. V. Mann*

brief communications

1039 Ascorbic acid and cholesterol levels in pastoral peoples in Kenya. *J. D. Gatenby Davies and J. Newson*

original communications

1043 Sucrose and various carbohydrate-containing foods and serum lipids in man. *F. Grande, J. T. Anderson and A. Keys*
 1052 Triceps skin fold and upper arm muscle size: norms for assessment of nutritional status. *A. R. Frisancho*
 1059 Nitrogen retention of young men who consumed between sixteen and eight grams of nitrogen from a combination of rice, wheat, chicken and milk. *H. E. Clark, W. H. Moon, J. L. Malzer and R. L. Pang*
 1065 Differential effects of diet composition and weight loss on glucose tolerance in obese women. *M. Jourdan, D. Goldbloom, S. Margen and R. B. Bradfield*

perspectives in nutrition

1071 Food faddism: a challenge to nutritionists and dietitians. *L. D. McBean and E. W. Speckmann*

international nutrition

1079 Pathogenesis of anemia in coastal New Guineans. *G. G. Crane, P. Jones, A. Delaney, A. Kelly, A. MacGregor and J. Leche*
1088 State of nutrition in preschool children in Teheran. I. Calorie and protein intake. *H. Ghassemi, M. Massoudi and F. Azordegan*

1095 nutrition news**1099 errata****symposium**

Vitamin E: Biochemistry, nutritional requirements and clinical studies. Guest editor—
M. K. Horwitt

PART II

1105 Problems in the stereochemical designation of tocopherols and related compounds. *O. Hoffmann-Ostenhof*
1110 Comparison of alpha-tocopheryl nicotinate and acetate on skin microcirculation. *M. Kamimura*
1117 Creatine kinase and myofibrillar proteins in hereditary muscular dystrophy and vitamin E deficiency. *R. E. Olson*
1130 Pathophysiology of vitamin E deficiency in monkeys. *K. C. Hayes*
1141 Vitamin E deficiency anemia in Old and New World monkeys. *L. M. Ausman and K. C. Hayes*
1152 Blood levels of α -tocopherol in a disorder of lipid peroxidation: Batten's disease. *A. N. Siakotos, N. Koppang, S. Youmans and C. Bucana*
1158 The premature infant, vitamin E deficiency and retrorenal fibroplasia. *L. Johnson, D. Schaffer and T. R. Boggs, Jr.*
1174 A double-blind trial of vitamin E in angina pectoris. *T. W. Anderson and D. B. W. Reid*
1179 Long-time treatment of intermittent claudication with vitamin E. *K. Haeger*
1182 Status of human requirements of vitamin E. *M. K. Horwitt*
1194 Closing remarks. *K. E. Mason*

Number 11, November 1974

presidential address

1195 Toward accreditation of nutrition as a medical subspecialty. *D. B. Coursin*

letters to the editor

1200 Serum insulin and growth hormone after kwashiorkor. *S. M. Kajubi and R. M. Okel*
1201 Indigestible carbohydrates. *F. C. Bing*
1202 Coronary heart disease and dietary fiber. *L. M. Klevay*

brief communications

1204 Dietary sucrose and DNA formation in rat liver and kidney with starch. *H. Mohammadiha*
1212 Resistance to ketonuria and ketosis in obese subjects. *H. Mohammadiha*

original communications

1214 Simplified method for the long-term study of turnover and body masses of cholesterol by input-output analysis. *P. Samuel and S. Lieberman*
1221 Vitamin B₁ status in pregnancy. *S. Heller, R. M. Salkeld and W. F. Körner*
1225 Riboflavin status in pregnancy. *S. Heller, R. M. Salkeld and W. F. Körner*

perspectives in nutrition

1231 Lysine supplementation of wheat proteins: a review. *S. B. Vaghefi, D. D. Makdani and O. Mickelsen*

methods in nutrition

1247 Biopterin content of human and rat fluids and tissues determined protozoologically. *H. Baker, O. Frank, C. J. Bacchi and S. H. Hutner*

international nutrition

1254 Patterns of protein-energy malnutrition in early childhood in Jordan. *S. S. Hijazi*

report of meeting

1259 Measurement of nutritional status. *F. Falkner and A. F. Roche*

symposium

III International Symposium: Intestinal Microecology. Guest editors—*M. H. Flock and D. J. Hentges*

1265 Preface. *M. H. Flock and D. J. Hentges*
1266 Introduction: The villus in chemostat man. *T. D. Luckey*

I. Mucosa Indigenous Flora Interactions

1277 Morphological alterations in the microvillous border of villous epithelial cells produced by intestinal microorganisms. *S. L. Erlandsen and D. G. Chase*
1287 Spiral-shaped organisms on the surface colonic epithelium of monkey and man. *A. Takeuchi, H. R. Jervis, H. Nakazawa and D. M. Robinson*
1297 Significance of anaerobic spirochetes in the intestines of animals. *D. L. Harris and J. M. Kinyon*
1305 Lactobacilli which attach to the crop epithelium of the fowl. *R. Fuller and B. E. Brooker*

II. Microflora Metabolism

1313 Nutritional features and ecology of predominant anaerobic bacteria of the intestinal tract. *M. P. Bryant*
1320 Metabolic interactions among intestinal microorganisms. *M. J. Wolin*
1329 Biohydrogenation of sterols and fatty acids by the intestinal microflora. *H. Eyssen and G. Parmentier*
1341 Microbial bile acid transformation. *T. Midtvedt*
1348 Metabolism of drugs by microorganisms in the intestine. *P. Goldman, M. A. Peppercorn and B. R. Goldin*

Number 12, December 1974

letters to the editor

1357 Heat stability of serum pyridoxal. *B. B. Anderson and D. L. Mollin*
1357 Lysine supplementation of various cereals. *M. el Lozy and G. R. Kerr*
1358 Heat stability of synthetic and natural pyridoxal. *R. E. Davis and B. K. Smith*

original communications

1359 Nutritional status of Mexican American preschool children in a border town.
P. B. Acosta, R. G. Aranda, J. S. Lewis and M. Read
1369 Bile acid metabolism and hepatic disease following small bowel bypass for obesity.
H. P. Sherr, P. P. Nair, J. J. White, J. G. Banwell and D. H. Lockwood
1380 A comparison of methods for estimating human body composition. *H. J. Krzywicki, G. M. Ward, D. P. Rahman, R. A. Nelson and C. F. Consolazio*
1386 Gastrointestinal protein loss in mild hookworm and roundworm infections. *M. C. Gupta, A. K. Basu and B. N. Tandon*
1390 In vitro reconstitution and reversal of nonspecific protective substances of serum in protein deficiency. *K. S. Ratnakar and U. Ramachandranaiyah*

perspectives in nutrition

1395 Antitoxic effects of plant fiber. *B. H. Ershoff*

international nutrition

1399 Biochemical detection of thiamin deficiency in infants and children in Thailand.
B. Pongpanich, N. Srikrikkrich, S. Dhanamitta and A. Valyasevi

1403 nutrition news**1403 ASCN call for abstracts****1404 announcements****symposium**

III International Symposium: Intestinal Microecology. Guest editors—*M. H. Flock and D. J. Hentges*

III. Intestinal Immune Response

1409 Interactions between mechanisms controlling the intestinal microflora. *R. Freter*
1417 Specific immune antibacterial mechanisms in the intestines of mice. *D. Rowley*
1424 Cellular immunity in enteric disease. *F. M. Collins and P. B. Carter*
1434 Immunologic control of soluble protein absorption from the small intestine: a gut-surface phenomenon. *W. A. Walker, K. J. Isselbacher and K. J. Bloch*
1441 Contribution of the K88 antigen of *Escherichia coli* to enteropathogenicity; protection against disease by neutralizing the adhesive properties of K88 antigen. *G. W. Jones and J. M. Rutter*

IV. Microflora in Colon Cancer

1450 Special problems associated with the isolation and identification of intestinal bacteria in fecal flora studies. *W. E. C. Moore and L. V. Holdeman*

1456 Effect of diet on human fecal flora: comparison of Japanese and American diets. *S. M. Finegold, H. R. Attebery and V. L. Sutter*

1470 Effects of a high beef diet on bowel flora: a preliminary report. *B. R. Maier, M. A. Flynn, G. C. Burton, R. K. Tsutakawa and D. J. Hentges*

1475 Steroid nuclear dehydrogenation and colon cancer. *M. J. Hill*

1481 Opportunistic infections in colon carcinoma. *G. T. Keusch*

1486 Perspectives. *A. Balows*

1489 Subject index

1496 Author index



